



Rising to Greatness

*An Imperative for
Improving Iowa's Schools*



IOWA EDUCATION SUMMIT



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Foreword

In advance of the Governor's 2011 Summit on Education, I am pleased to present this report, *Rising to Greatness: An Imperative for Improving Iowa's Schools*, to the people of Iowa. When I first came to Iowa in January 2011, Governor Branstad gave me a bold, perhaps even audacious, goal as his State Director of Education: *Do what it takes to return Iowa to first in the nation, if not first in the world, in educational quality*. This goal will not be accomplished through small and incremental tinkering with the status quo. A goal like this requires meaningful change and the courage to do things differently than we have in the past.

Iowa's education system once stood as the envy of every state in the nation and of many countries around the world. Using practically any quantifiable measure of excellence, Iowa was at the apex of educational achievement for decades. The school system in Iowa magnificently fueled the state's economy with skilled farmers, factory workers, scientists, knowledge workers, and entrepreneurs. We must honor the tremendous work of those who came before us, who put in place the strong foundations on which we now build. While it is important not to overly romanticize the past, it is important to note that Iowa has a tradition of excellence in education arguably unmatched by any other state in the union.

By and large, the present system of education in Iowa remains good. High school graduation rates are near 90 percent, Iowa frequently performs near the top of some national measures such as ACT results, and Iowa's schools serve as the foundational bedrock of so many communities across the state. A core state value of "equity" is apparent in the state's funding model, the quality of school facilities, generally broad access to technology, and the statewide commitment to providing a high-quality educational system regardless of if a student lives in a city, suburban area, or small town. Iowa also has another significant strength to build on—its people. Iowans continually demonstrate a commitment to supporting their schools, and education professionals throughout the state are dedicated and incredibly caring, talented people. There is tremendous capacity in this state from which to build.

So, Iowa's schools are good, but are they great? The future of our schools, if not our state and even our nation, will depend on our collective willingness to engage in the hard work necessary to make dramatic improvements to education—to have our schools rise from good to great.

Today we stand at an important decision point for Iowa. The key question we face is: "Are we willing to do what will be necessary to make Iowa's schools great?" Are we willing to confront the fact that Iowa's standing as an education leader is now questioned as our results have stagnated, while other states have accelerated? Are we willing to tackle the even more vexing and troubling issue that other nations have accelerated past us? Our success in improving our schools begins by confronting the reality that something must be done.

This report does not intend to point the blame at any person, group, organization, or institution. We should all equally share in the historical successes our schools enjoy—but we are also all culpable for their current shortcomings. Making real improvements to Iowa's schools will take everyone.

The intent of this report is to spur constructive and honest debate in the service of improvement. I fully expect those who advocate protecting the status quo to, almost reflexively, rise up in its defense and attempt to dismiss or undermine the facts presented here. I also fully expect those who seek to press the politics of "blame and shame" to try and use this report as a weapon against perceived enemies.

We must summon and listen to the "better angels of our nature" and resist both of these approaches. Tolerance, pragmatism, reason, honesty, humility, and love must be the values on which we come together to build this movement to improve our schools.

Everyone wants a better future for Iowa's kids.

In the days ahead, we will work together on constructing the best path forward to improve Iowa's schools. The work will be hard, and at times it may feel as if we have lost our way. But by relying on Iowa's proud tradition of excellence in education, drawing on the tremendous existing capacity in our state, and dreaming together about what a world class and truly great school system might be, we will emerge with our plan to meet that audacious goal of being the best education system in the nation and the world.

With respect and admiration,

Jason E. Glass, Ed.D.
State Director, Iowa Department of Education



Jason E. Glass, Ed.D.

The message
is clear:

Education in
Iowa must
make dramatic
improvement.



Introduction

Other states and countries are surpassing Iowa.

In the early 1990s, the Cold War ended, Back to the Future III was in theaters, and Iowa led the nation in reading and mathematics. Times have changed. A decade into the 21st century, Iowa has conceded its place at the top. During the past 20 years, achievement trends illustrate Iowa's slide from a national leader in PK-12 education to a national average—sometimes below average—performer as other states (and nations) have accelerated past the state.

Is Iowa up to the challenge?

Iowa students' futures are at risk. Collectively, Iowa students are not hitting the mark in mathematics and reading competency. Sure, Iowa has its share of super-achievers. But the mass of Iowa students—not just underprivileged or minority students, but many of the majority white, relatively affluent students as well—are falling short of what is needed to attain quality jobs, growing incomes, and secure livelihoods in today's globally competitive world.

The world has moved beyond the industrial age and information age **and is now in the innovation age**. Students must be armed not only with knowledge, but also with skills and insights needed to critically analyze and innovate. The pressing problems and grand opportunities the world faces require that many more people contribute as innovators and problem solvers, not order takers and implementers. Innovators will prosper. Order takers will stagnate. The days of an abundance of low-skill jobs have come to an end.

Even if Iowa reclaims its place as a national leader in education, is that good enough?

Iowa's students are not just competing with the rest of the nation's 50 million students for careers and leadership positions in business and research. That was yesterday. Today, Iowans are competing with China and India's approximately 400 million students—two countries that are rapidly improving their education systems. Many of these foreign students are products of advanced, accelerated curricula. And they're gunning for premium jobs anywhere on the planet—jobs that many Americans may have come to take for granted.

To regain its position as a top education system in the nation, Iowa must support the challenges of the future. The path forward must include:

1. Clear standards with high expectations and accountability for results;
2. A fair and aligned assessment system which supports feedback at all levels;
3. Highly effective educators; and
4. Innovative learning environments enriched by technology.

Iowa's schools have achieved great things throughout past decades and have a proud and strong foundation. Certainly, tearing the system apart and starting anew is not the answer. Rather, the state needs to build from its position of strength and move decisively toward new goals with new methods, resources, and standards. This report highlights Iowa's past accomplishments, reviews longitudinal trend data, pinpoints the impact of past and current performance, and outlines opportunities for improvement in the future.

A proud past

Throughout the 20th century, Iowa built a nationally recognized school system that consistently developed skilled learners in every part of the state. This system propelled Iowa to the forefront as a leader in education. As Iowa progressed toward greater diversity in business, industry, and population, the public education system evolved to reflect and encompass those changes. Highlights of this evolution include:

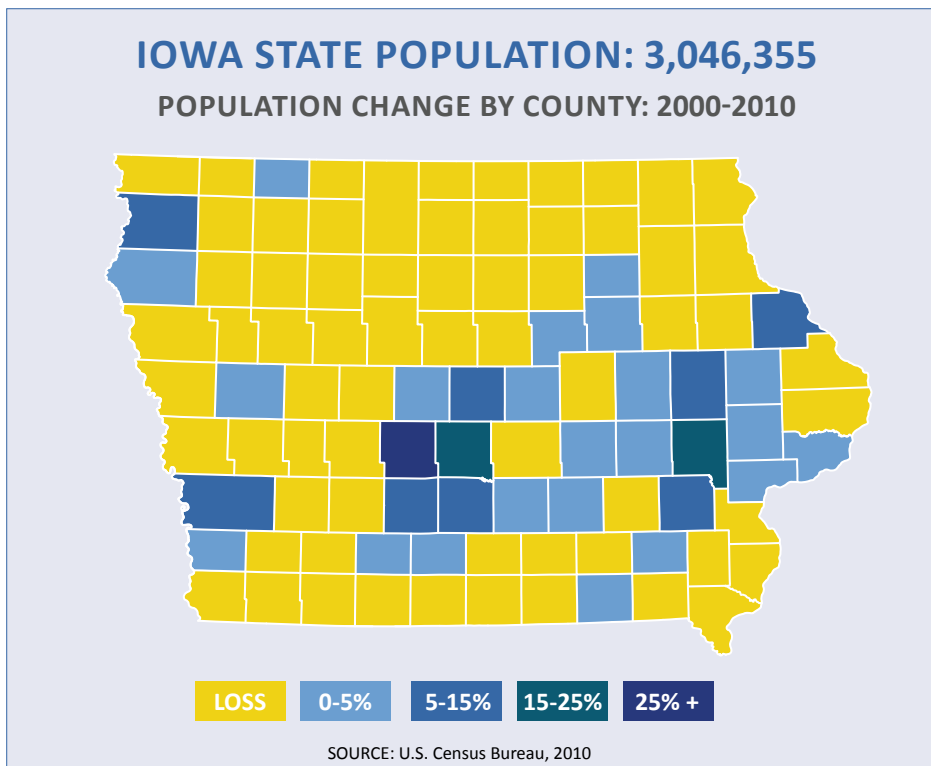
- **A nationally recognized system of Regent Universities and private colleges** originating in the mid 1800s. Today, students come from around the world aspiring for a diploma from an Iowa post-secondary institution.
- **A system of community colleges** established in the 1960s to provide more students education and training beyond high school. Iowa's community college system provides an important gateway into higher education for some students and also serves as a key workforce development system.
- **Area Education Agencies (AEAs)** launched in the mid 1970s to provide regional support for local schools and their teachers. Today, AEAs provide an incredible number of special education and instructional services to districts across the state.
- **Computers** arriving in Iowa classrooms, starting at the teacher's desk, and later providing a new avenue for rich content delivery to students. Many Iowa districts recently have adopted a policy to provide one laptop to every student.
- **The No Child Left Behind Act (NCLB)** approved by Congress in 2001. NCLB was signed into law in 2002, holds schools accountable for student achievement levels and imposes penalties for schools that do not make adequate yearly progress (AYP) toward meeting the goals of NCLB. Iowa adopted accountability measures aligned with the goals of NCLB.
- **The Iowa Teaching Standards** developed and adopted by the State Board of Education in 2002. The Iowa Standards for School Leaders followed in 2008. These initiatives gave districts new, evidence-based models for quality teaching methods.
- **The Iowa Core** contains essential concepts and skills in English/language arts, social studies, science, and mathematics, as well as 21st century skills in financial literacy, health literacy, and other key areas. The Iowa Core represents the state's work to set high expectations for all students. Setting these statewide expectations was an important step for Iowa toward becoming an education "system" as opposed to a loose confederation of school districts.



That was then. This is now.

The big are getting bigger. The small are getting smaller.

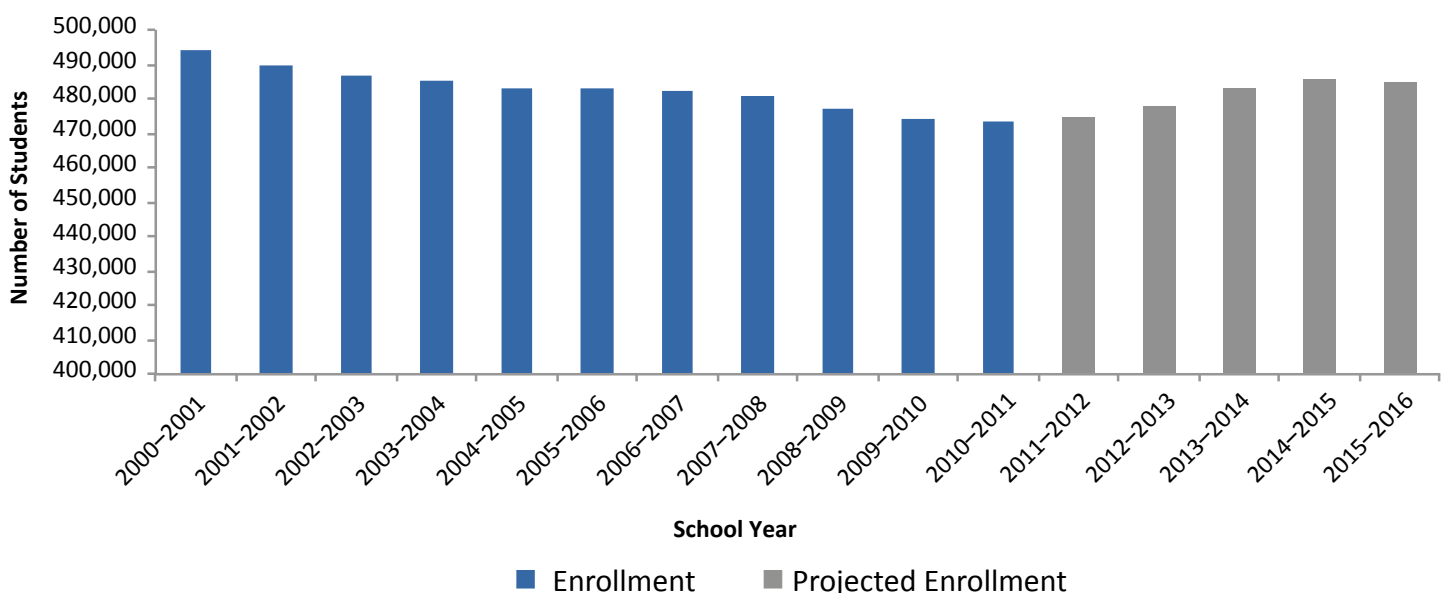
Iowa's population is growing, but not dramatically so, and certainly not compared to many other states. While the overall population has grown about 10 percent in the past 20 years, 66 of Iowa's 99 counties saw decreases in population in the past 10 years. In short, Iowa's metropolitan areas with their suburbs and bedroom communities are growing. Iowa's rural areas are shrinking in population, as is rural student enrollment.



Iowa Department of Education statistics show a consecutive 14-year decline in public school enrollment. The last time Iowa had an enrollment upswing was in the 1996-97 school year. In the fall of 2010, enrollment shrank in 63 percent of Iowa's 359 school districts. Meanwhile, several districts in the greater Des Moines area and the Cedar Rapids-Iowa City corridor experienced growth in enrollment, highlighting the population shift from rural to urban-suburban areas. All signs point to the persistence, if not acceleration, of this trend.

Some good news may be on the horizon in terms of overall student enrollment growth in Iowa. Consistent with population growth indicated by the 2010 Census, the number of students attending public schools in Iowa is projected to increase slightly over the next five years, growing by 11,400 students, or 2.4 percent. The lion's share of that growth will be in metropolitan districts.

Iowa Public Enrollment

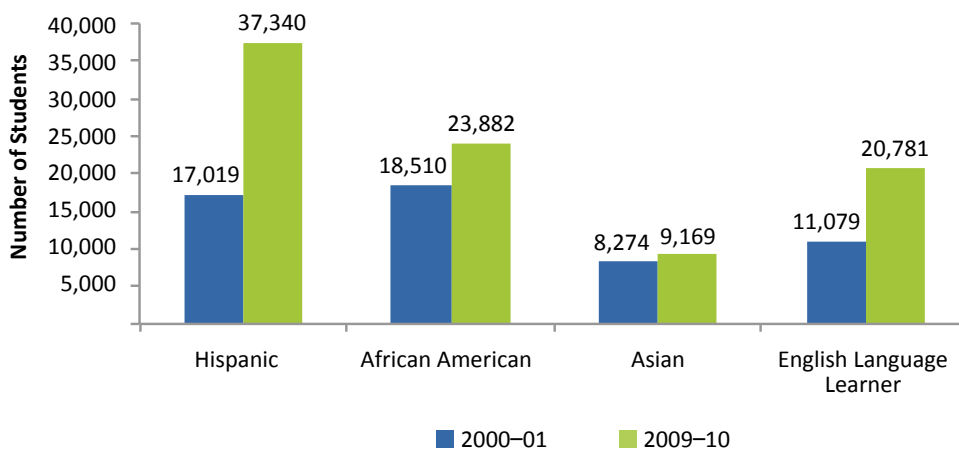


Iowa's communities are changing.

The past decade has seen an increase in the minority student population in Iowa, from approximately 10 percent of students to now 18 percent. While most of the state is still fairly homogenous (82 percent white), there is a growing trend of more Hispanic (8 percent) and African American (5 percent) students in Iowa school districts.

The number of students who don't speak English as a first language also continues to grow. In 2000-01, English Language Learners (ELLs) made up 2.3 percent of the public student population. By 2009-10, this population nearly doubled to 21,000, or 4.4 percent of the student body population.

Change in Enrollment



More kids are struggling through economic hardship.

The percentage of Iowa students eligible to receive free or reduced-price lunch (FRL) has increased from 27 percent in 2000-01 to 37 percent in 2009-10. The impact of this increase is extremely important because multiple studies show that poverty plays a big role in lower academic achievement (Hernandez, 2011; Walker, et al., 1994). Research by Hart and Risley (1995) found a significant difference in the language interactions between parents and children in low-income families compared to middle- or higher-income families. **By age 3, children from middle-income or higher-income families typically have heard 30 million more words than children from low-income families.** This discrepancy has been shown to be a predictor of future reading ability.

Impact:

Shifts in Iowa communities—from decreasing community populations to communities with increased diversity and economic hardships—pose challenges to Iowa's education system. Meeting the needs of these student populations will require that Iowa educators are equipped with the knowledge, skills, and resources to meet students' varying needs.

Opportunity:

Embracing the important role diversity and culture play in schools and creating learning opportunities that appeal to existing and new student populations will become increasingly important. Iowa's educators must sustain high expectations for all students, regardless of each student's background.

“We face an important dual challenge: Providing a consistent, high-quality learning experience for ever-growing urban and suburban districts, as well as for shrinking rural districts. To do that, we must be smarter in how we manage limited resources.”

Jason E. Glass, Ed.D.

State Director,
Iowa Department of Education





Academic achievement must improve if Iowa students are to compete

Iowa's achievement results, across multiple measures, show an alarming slide toward mediocrity. Scores on the National Assessment of Educational Progress (NAEP) have not kept pace with the nation. Students in many demographic groups have results similar to or, in some cases, lower than their peers across the United States. Further, Iowa's white students, whether poor or affluent, now often score below the national average on NAEP, whereas these groups historically had strong, positive test results. Scores on the Iowa Tests of Basic Skills (ITBS) and Iowa Tests of Educational Development (ITED) have also flat-lined. Results on the ACT college-entrance assessment remain stagnant as well, and many students who take the test are not ready for college in all subject areas. Raising student achievement is crucial for Iowa to resurrect its profile as a top education state.

What is NAEP?

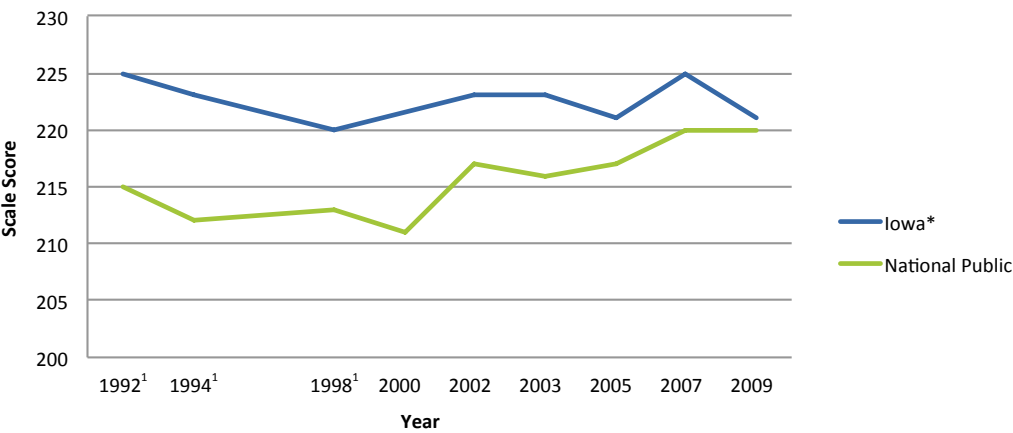
The National Assessment of Educational Progress (NAEP) is the only continuing and nationally representative assessment of what our nation's students know and can do. NAEP often has been called the "gold standard" of assessments because it is developed using the best thinking of assessment and content specialists, education experts, and teachers from around the nation.

Iowa’s reading progress is stuck in neutral and slowly slipping backward.

In 1992, no state scored higher than Iowa on the NAEP in fourth-grade reading. However by 2009, 13 states were scoring significantly higher than Iowa. In 2009, the average NAEP reading score for fourth-grade students in Iowa was 221, which was not significantly different from that of the nation’s public schools (220) and was lower than Iowa students’ performance in 1992 (225). Iowa students have stagnant scores, while similar students in many other states continue to improve.

Reading proficiency by the end of third grade can be a make-or-break point in a child’s educational development. Fourth grade is a crucial development point for student reading comprehension, when kids truly start “reading to learn” rather than “learning to read” (Fiester, 2010). Students are using their skills to gain more information in subject areas such as mathematics and science, to solve problems, to think critically about what they are learning, and to act upon and share that knowledge in the world around them. These data must be taken seriously.

NAEP Reading - Grade 4



¹Accommodations were not allowed prior to 2000.
*Iowa did not test in 2000.

NAEP Reading - Grade 4			
	1992	2009	Change
Average Score Iowa	225	221	-4
Average Score National Public	215	220	+5
Number of States Significantly Higher	0	13	-13
% States Significantly Higher	0%	27%	-27%

Iowa’s reading score ranking is slipping, not because Iowa schools are getting worse. Rather, Iowa is losing ground because many proficiency outcomes have stagnated while those in other states have surged. The chart on the following page shows the change in NAEP scale scores from 2003 to 2009 for all 50 states and the District of Columbia in fourth-grade reading. Iowa students’ scores decreased by two scale-score points over this period.

“It’s not so much that the quality of Iowa’s schools is declining. It can easily be argued that schools in Iowa today are better in many ways than they used to be. The issue is that Iowa’s results have stagnated, while other states and countries have done the work to make dramatic improvements to their systems which are paying off. If you aren’t getting better, you are getting worse.”

Jason E. Glass, Ed.D.
State Director,
Iowa Department of Education



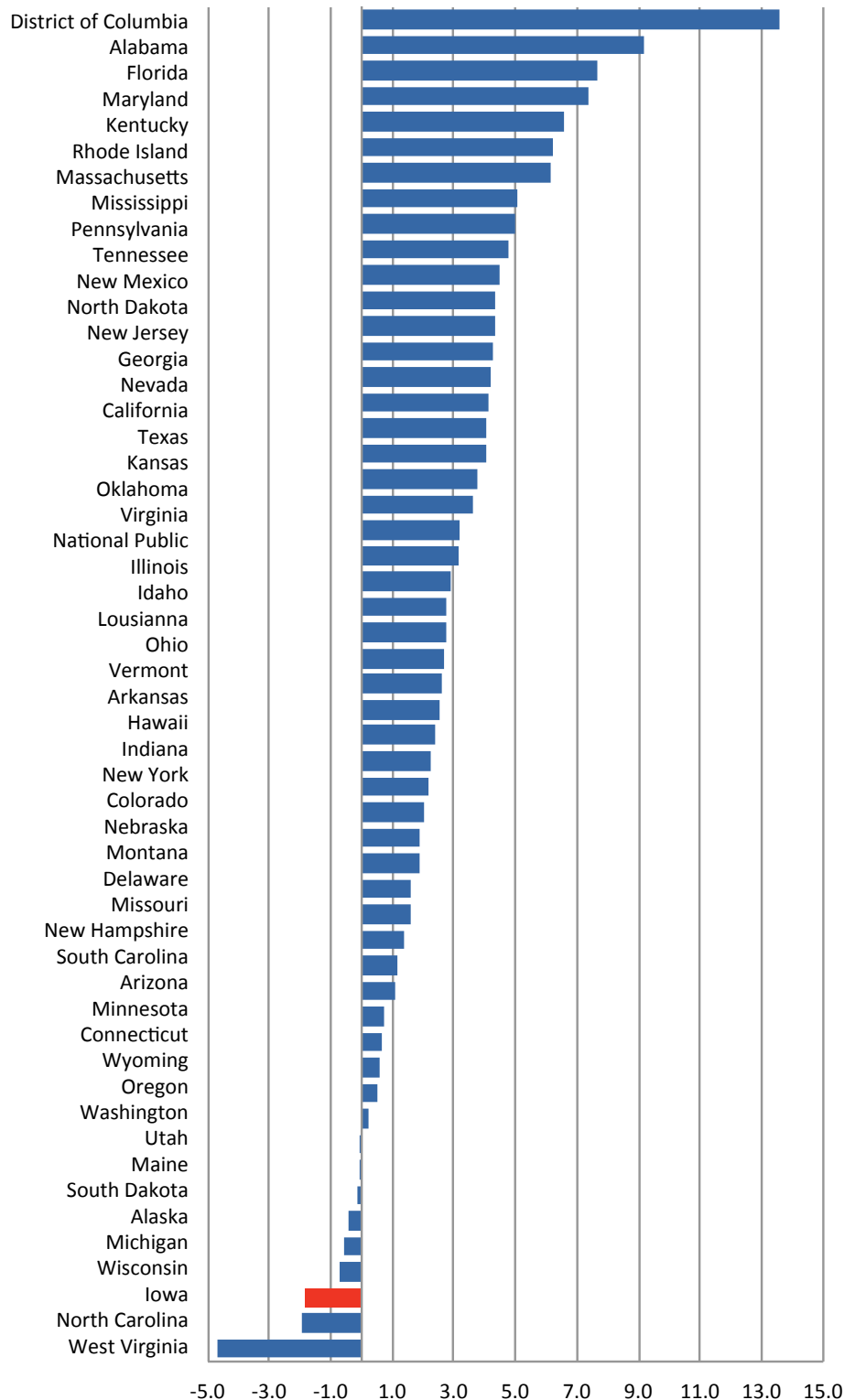
The evidence is clear.

Across all indices, Iowa's reading skills progress is lackluster while several other states are catching up and moving forward.

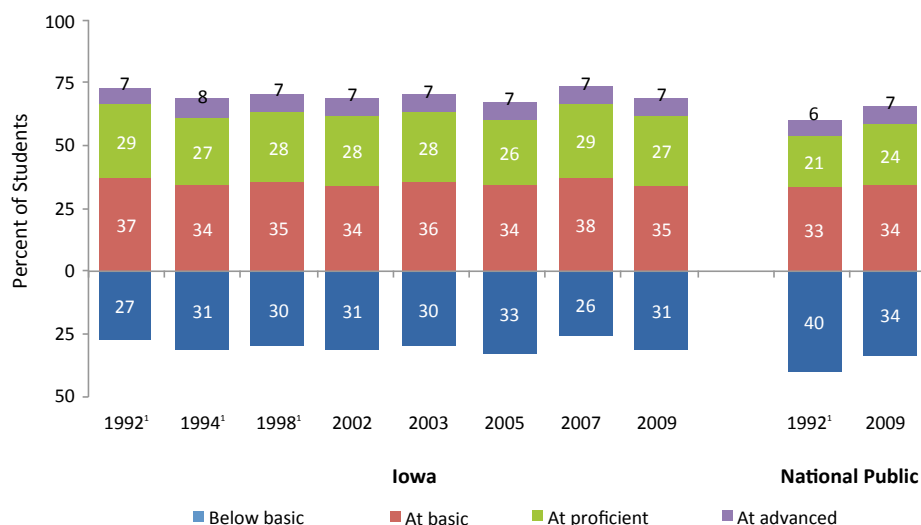
These low levels of improvement are unacceptable if Iowa is to regain preeminence as a high-performing school system.



Change In NAEP Reading Scale Scores
Grade 4 - 2003 to 2009



NAEP Grade 4 Reading - All Students



Scores on ITBS mirror the NAEP results in fourth-grade reading. ITBS is given in every public school and most private schools in Iowa.

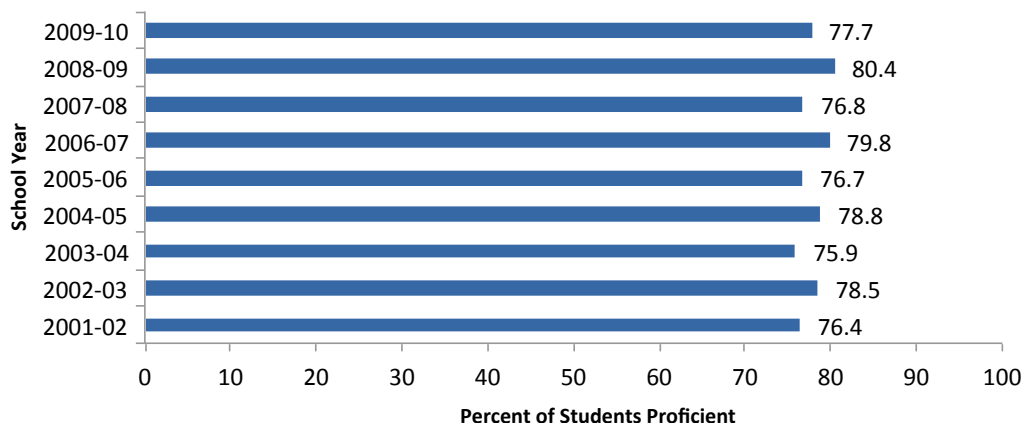
Both the ITBS and NAEP show little change in achievement levels since 2000 in the percent at basic or above (NAEP) or proficient (ITBS). Student scores on NAEP appeared to be improving in 2007, but slipped back in 2009. The percent of students proficient on ITBS, scoring at the intermediate level or above, has changed just over 1 percent (1.3) during the past nine-year period.

¹ Accommodations were not permitted for this assessment.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP).

Flat-Line Achievement in ITBS Grade 4 Reading

All Iowa Students



Impact:

Low achievement in reading has important long-term consequences in terms of individual earning potential, global competitiveness, and general productivity. Low literacy levels also show a strong correlation with poverty, drop-out rates, crime, and unemployment.

Opportunity:

Promoting skills that lead to successful reading acquisition in the early grades will help facilitate improvement in reading, writing, and language use, as well as a positive attitude toward reading to learn that will benefit students' achievement in all subjects. Highly effective educators must be able to determine students' strengths and challenges and be able to successfully support each child using evidence-based practices and professional judgment.



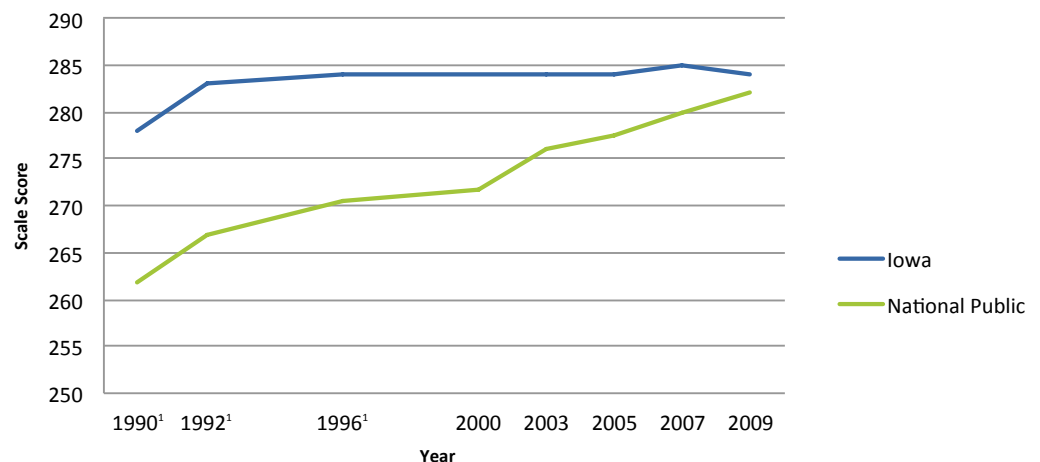
8th grade mathematics also flat lining.

The eighth-grade mathematics results show a similar trend. From 1992 to 2009, Iowa's eighth-grade NAEP mathematics scores fell from the top in the nation to average. Iowa students scored 16 points above the nation in 1992 (283). In 2009, Iowa scores were only two points above the national mean. **Note:** The results do not show that Iowa's performance diminished, rather that other states have been increasing at a faster rate, sometimes much faster.

Since the 1990s, the average mathematics scores of Iowa eighth-grade students on the State NAEP assessments have not grown as much as scores in most other states. During the same period, the national average score for public students had a significant gain. In 1992, no states scored significantly higher than Iowa, but by 2009, 15 states were scoring significantly higher.

The ITBS mathematics assessments, like the NAEP, show little change since 2000 in the percent of proficient students (ITBS) or basic or above (NAEP). The percent of Iowa students scoring in the proficient range on the eighth-grade ITBS mathematics was 72 percent in 2001-02. During the 2009-10 school year, 75.4 percent of the students scored proficient, a change of only 3.4 percent over nine years.

NAEP Mathematics - Grade 8



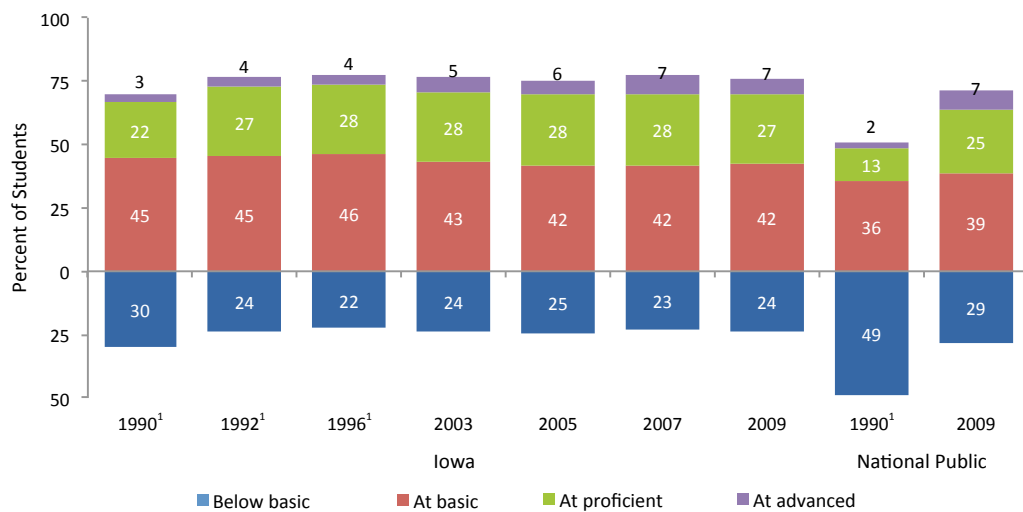
*Accommodations were not allowed prior to 2000.

*Iowa did not test in 2000.

NAEP Mathematics - Grade 8

	1992	2009	Change
Average Score Iowa	283	284	+1
Average Score National Public	267	282	+15
Number of States Significantly Higher	0	15	-15
% States Significantly Higher	0%	31%	-31%

NAEP Grade 8 Mathematics - All Students

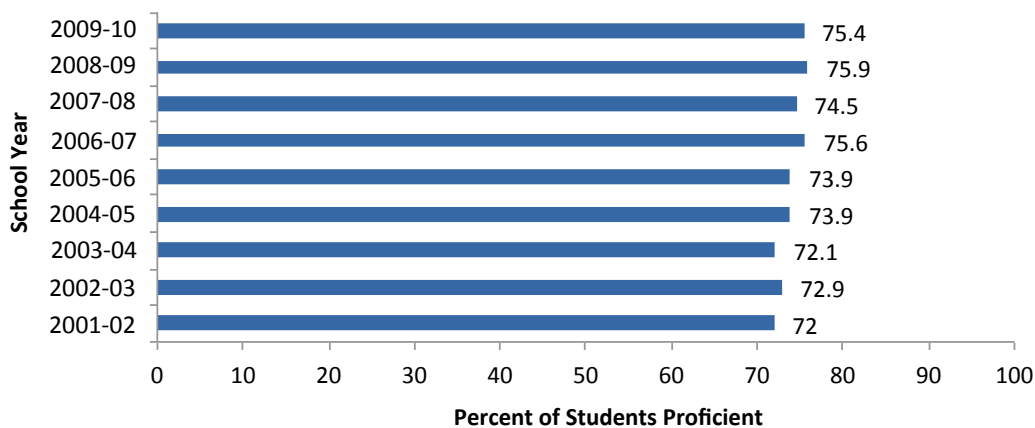


¹ Accommodations were not permitted for this assessment.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP).

Flat-Line Achievement in ITBS Grade 8 Mathematics

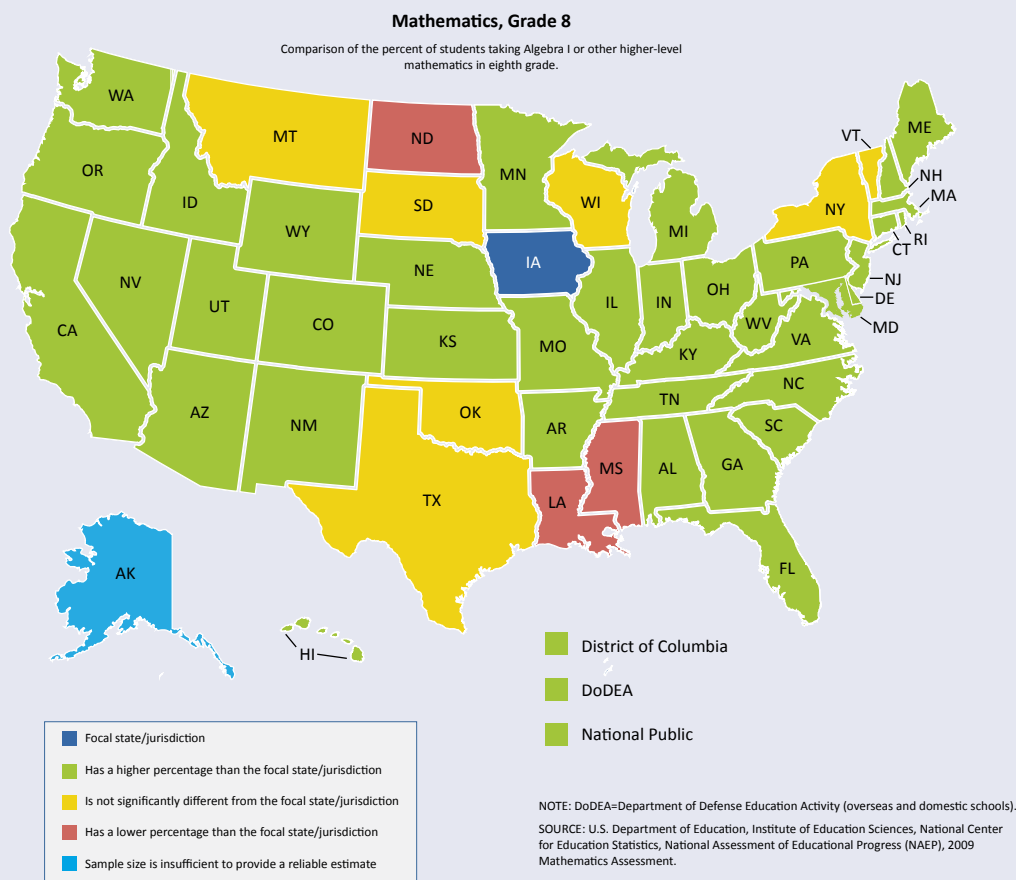
All Iowa Students



Not enough Iowa eighth graders are taking rigorous mathematics classes in school.

According to the National Council of Teachers of Mathematics (2000), preparing students for the increasingly complex mathematics of this century requires beginning in the elementary grades. Research shows that during middle school students form the foundation to prepare them for higher mathematics requirements in high school and college (Chazan, 1994; SREB, 1998). Algebra is often described as the “gatekeeper” for advanced mathematics and for entrance into college. Students who wish to take calculus during their high school career, but do not take Algebra I early enough, must find some way to accelerate their academic progress such as taking a math course in summer school. Yet only 29 percent of eighth-grade Iowa students taking NAEP in 2009 were enrolled in Algebra I or another higher-level mathematics course (Geometry or Algebra II).

This map shows the states that have higher percentages of eighth-grade students enrolled in higher-level mathematics courses than Iowa. Students in only three states recorded lower enrollment in Algebra I or another higher-level mathematics course: Mississippi (26 percent), North Dakota (26 percent), and Louisiana (24 percent). More than half of the eighth-grade students in Colorado, Massachusetts, Utah, Maryland, and California reported enrollment in Algebra I or another higher-level mathematics course.



Impact:

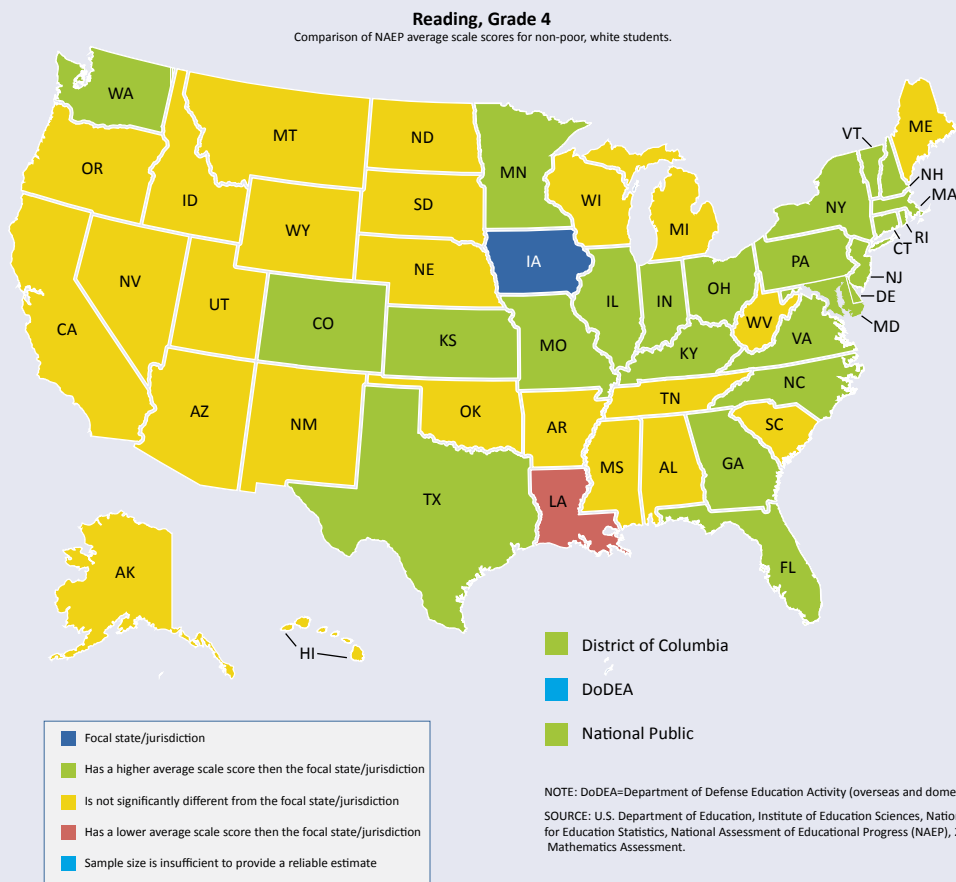
A flat line in mathematics achievement results puts Iowa students' futures at risk. This is especially true for Iowa, as the state's economy is so heavily based on science, technology, engineering, and mathematics (STEM) related fields such as agriculture, agribusiness, finance, insurance, advanced manufacturing, and biosciences. As a result of so few Iowa students taking Algebra I, Iowa is not well positioned in preparing its students for higher-level mathematics courses and also to be competitive in the global STEM workforce.

Opportunity:

To solve long-standing problems and add new talent to emerging opportunities, students need higher levels of understanding in the STEM fields. Some students may also require extra preparation and support to fully benefit from higher expectations and rigorous class work. In addition, fair assessments will be necessary to monitor progress and reliably measure students' academic growth.

The majority of Iowa students are underperforming

Some Iowans attribute Iowa's sluggish education performance as a result of the state's growing minority and economically-disadvantaged student population. However, that assumption is wrong. While Iowa demographics are changing—becoming more diverse, economically and ethnically—the same is happening in other states. A closer look reveals an alarming story about Iowa's majority white student performance. When 2009 NAEP assessment scores are disaggregated by race and socioeconomic standing, Iowa's mean scores are significantly below the national average for white poor and non-poor students. (The Department of Education uses the eligibility of students to receive free or reduced-priced lunch (FRL) as a measure for poverty.)



This map compares the 2009 NAEP reading scores for relatively affluent, white fourth-grade students. Sixty-four percent of the fourth-grade students assessed in Iowa were non-poor white students. The average score for these students falls below scores for similar students in many other states and below the national average. Similar results appear for the NAEP eighth-grade mathematics scores.

When the assessment scores for the white students are further disaggregated by location, Iowa's 2009 NAEP mean scores are below the national average. For example, in NAEP fourth-grade reading, Iowa scores for non-poor, white students by school locale were: city, 232; suburb, 236; town, 228; and rural, 227. These scores were statistically similar, but less than the nation's public schools' mean scores for these same groups (239, 237, 231, and 232, respectively).

Impact:

The underperformance of white students, who make up the majority of students in Iowa, is persistent across socioeconomic status and geography. These data suggest that no location, not the city schools nor the rural schools, are singularly at fault for the lack of growth in Iowa student assessment scores. This finding is a statewide issue that requires significant attention.

Opportunity:

By concentrating on student assets and addressing diverse student needs, all Iowa students will have an increased opportunity to be prepared for future success. Iowa school administrators will need to promote high expectations among faculty, staff, and students, and be able to communicate these priorities to community stakeholders to ensure a shared vision for successful school improvement.

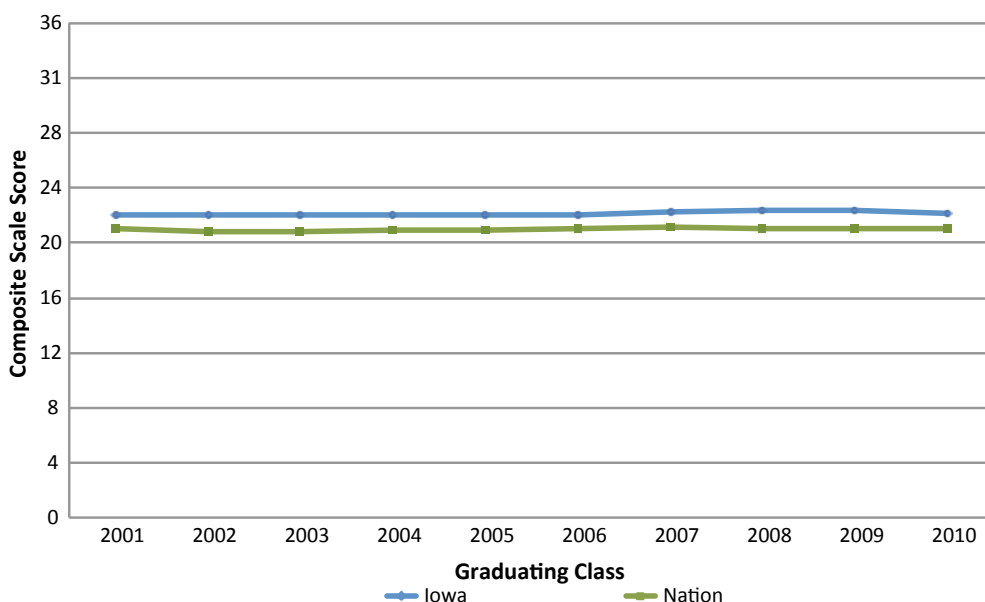
The ACT test assesses high school students' general educational development and their ability to complete college-level work.



High school ACT performance shows promise

Positive trends can be seen in Iowa ACT aggregate scores compared to the rest of the nation. Iowa consistently scores about one point higher than the nation (21.0). This is in large part due to the homogeneity of the students tested in Iowa and the fact that that it is mostly college-bound students who take the ACT in Iowa, as opposed to some other states where all students take the ACT. Iowa's ACT composite score average was 22.2 for the graduating class of 2010.

Average ACT Composite Scores



While the ACT shows somewhat better results than the national average when the scores are aggregated, 87 percent of the 2010 graduates taking the ACT in Iowa were white. When the 2010 ACT results are disaggregated by race, Iowa's white students have a composite score of 22.5, similar to that of the nation's white students (22.3), and less than the one-point difference between all Iowa students and the national average. **Iowa's white students score about the same as other white students across the nation on the ACT.**

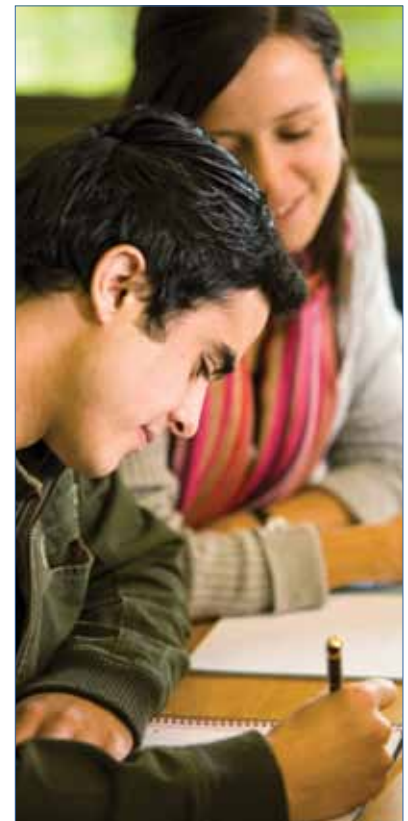
Average test scores are also influenced by the percentage of students tested. Almost half (47 percent) of 2010 graduates in the nation took the ACT for an average composite score of 21.0. Six states tested 100 percent of their graduates in 2010, with an average composite score of 20.0. In 2010, the largest district in Iowa, Des Moines Independent, required all seniors to take the ACT. The percentage of Iowa's graduates taking the ACT was relatively steady from 1998 through 2007, but more recently has dropped to around 60 percent in 2008 and remains at that level. The drop in participation in Iowa may be due to the large increases in community-college enrollment across the state in recent years. Community colleges do not require ACT scores for admission.

Another important indicator is the percentage of students who are ready for post-secondary course work. The ACT reports on the percent of students meeting college-ready benchmark scores in each of the four subjects assessed (English, mathematics, reading, and science), as depicted in this chart:

Percent of ACT Test Takers College-Ready				
	Iowa		Nation	
	2005	2010	2005	2010
Students Meeting All Four ACT Benchmark Scores	26%	30%	21%	24%
College English Composition (ACT English Score 18)	77%	77%	68%	66%
College Algebra (ACT Mathematics Score 22)	48%	51%	41%	43%
College Reading (ACT Reading Score 21)	59%	61%	51%	52%
College Biology (ACT Science Score 24)	34%	37%	26%	29%

In 2010, 30 percent of the Iowa students taking the ACT met all four benchmarks. The percent of Iowa students reaching these benchmarks has increased in three of the four subject areas during the last five years in response to legislation to increase graduation requirements. The percent of the nation's graduates meeting these benchmarks is consistently lower than that of Iowa's graduates. For example, 51 percent of Iowa's students taking the ACT scored at least a 22 on the mathematics assessment, demonstrating preparedness to enter college algebra, while only 43 percent of the nation's students reached this benchmark.

The ACT data are limited because they are not a representative sample of the entire state of Iowa. The ACT information would only be valid for all Iowa students if all students were assessed. Forty percent of Iowa students do not take the ACT. The students who do take ACT are primarily bound for a four-year college or university.



Impact:

Students are not adequately prepared, inspired, or connected for post-secondary success or opportunities. As a result, not all students possess the knowledge, skills, and experiences necessary for success in college or today's workforce.

Opportunity:

Implementing, integrating, and promoting college- and career-ready benchmarks for all students, not only those who are college-bound, will be an important step toward improving student preparedness.

What is an achievement gap?

The achievement gap is defined as the difference on a number of educational measures between the performance of subgroups of students, especially subgroups classified by race/ethnicity, disability, or socioeconomic status.



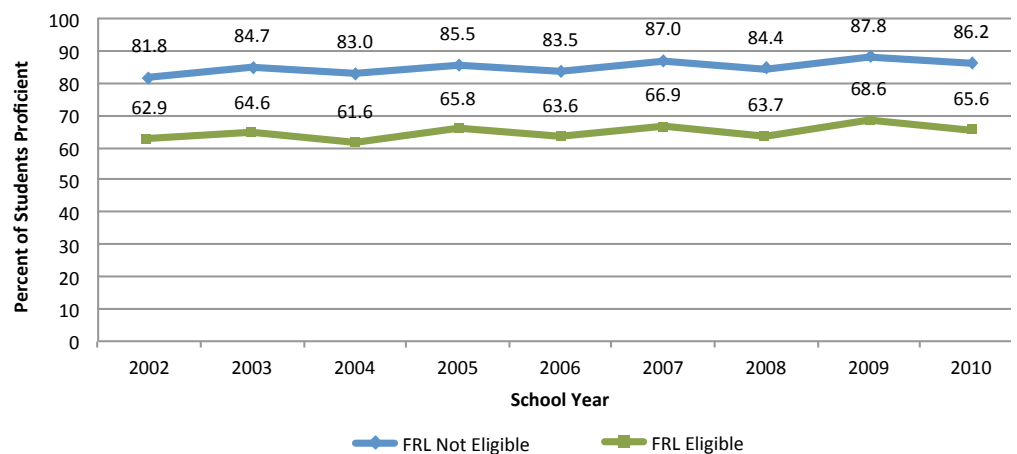
Race, poverty, and disability performance gaps: Large, persistent, and unacceptable

Iowa's achievement gap can be observed on a variety of measures, including standardized test scores, drop-out rates, and graduation rates. The Iowa Department of Education completed a study examining the factors influencing student achievement. Using a five-year matched cohort, trends were analyzed to determine predictors of achievement. The study revealed that race/ethnicity, poverty, and disability status were significant predictors of student achievement. Disability status was the strongest predictor, minority status was second followed by poverty status (Grinstead, 2011). Similar gaps exist in other states. In Iowa, the space between these gaps has not really changed for several years.

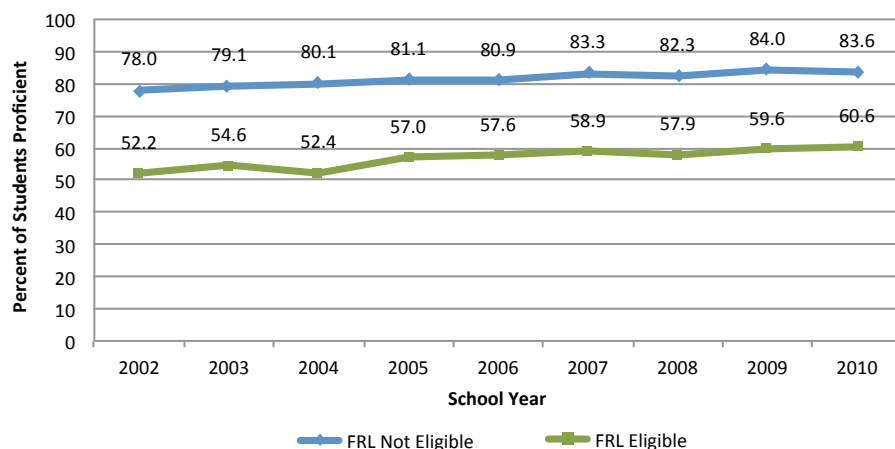
Role of poverty

The following charts highlight results of the ITBS for Iowa public school students from the 2001-02 to the 2009-10 school year. Each grade tested contains approximately 32,000 students. Fourth-grade reading and eighth-grade mathematics results showed slightly improved proficiency for students receiving FRL between 2001-02 and 2009-10. While this is good news, the data still show sizeable and persistent gaps between poor and more affluent students.

ITBS 4th Grade Reading Results: Percent Proficient By Socioeconomic Status



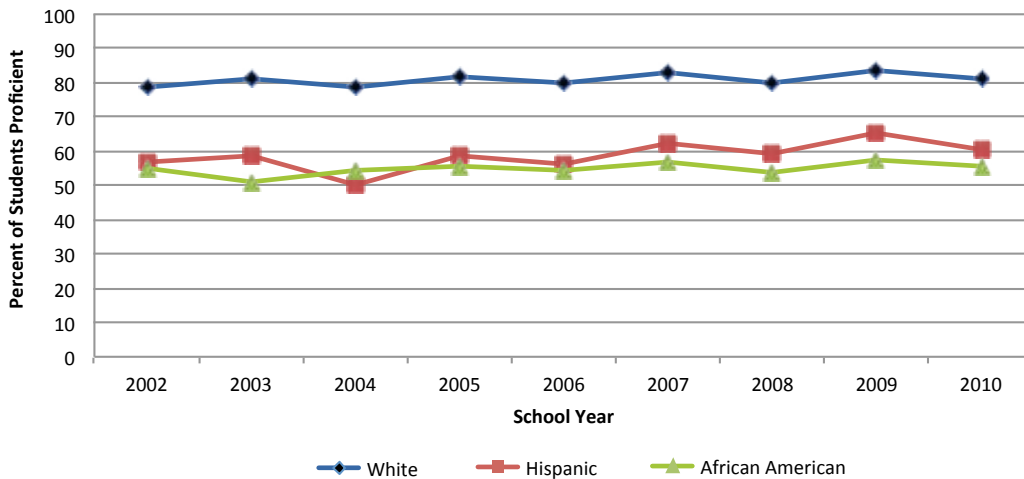
ITBS 8th Grade Mathematics Results: Percent Proficient By Socioeconomic Status



Race/Ethnicity

In fourth-grade reading, essentially no achievement gap exists between white and Asian students. In 2009-10, the gaps between white students and Hispanic and African American students were 21 and 25 percentage points, respectively. These achievement gaps have not changed appreciably over time.

ITBS 4th Grade Reading Results: Percent Proficient By Race/Ethnicity

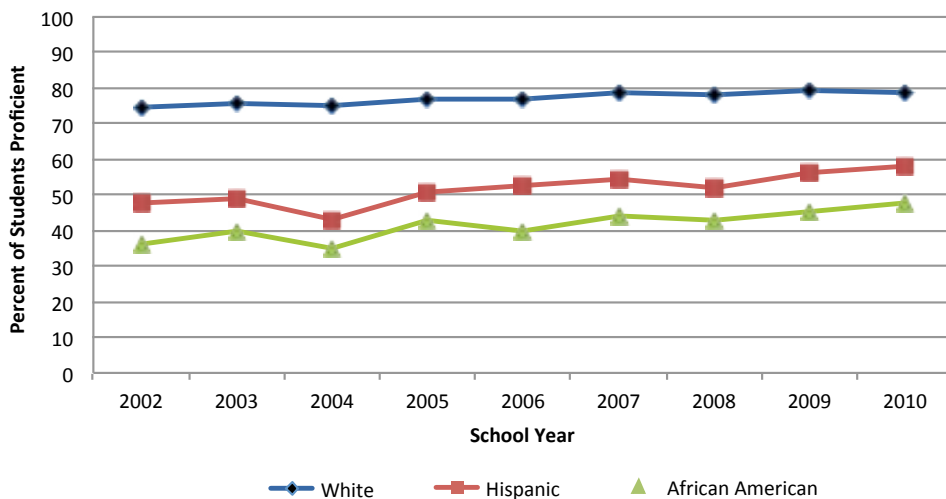


For every 10 white students, eight are scoring proficient. For every 10 Hispanic students about six are scoring proficient. And, for every 10 African American students tested, only five are scoring proficient.



In eighth-grade mathematics, Hispanic and African American student groups lagged behind white students in proficiency by 20 and 31 percentage points, respectively. Less than half of the African American students tested scored in the proficient range of Iowa's accountability assessment. These figures indicate that Iowa is not doing well educating many minority students throughout the state.

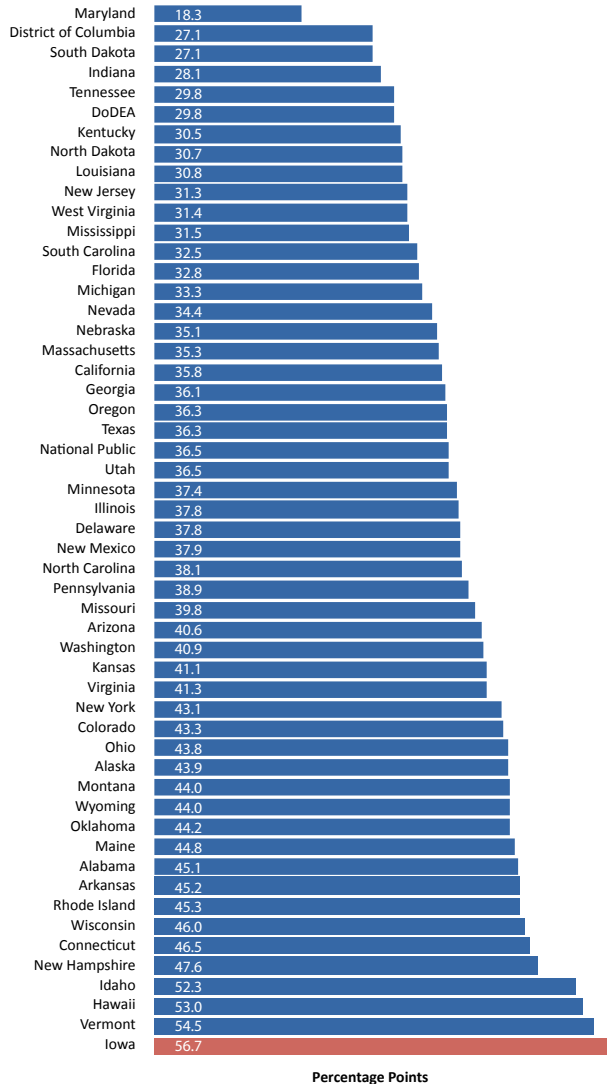
ITBS 8th Grade Mathematics Results: Percent Proficient By Race/Ethnicity



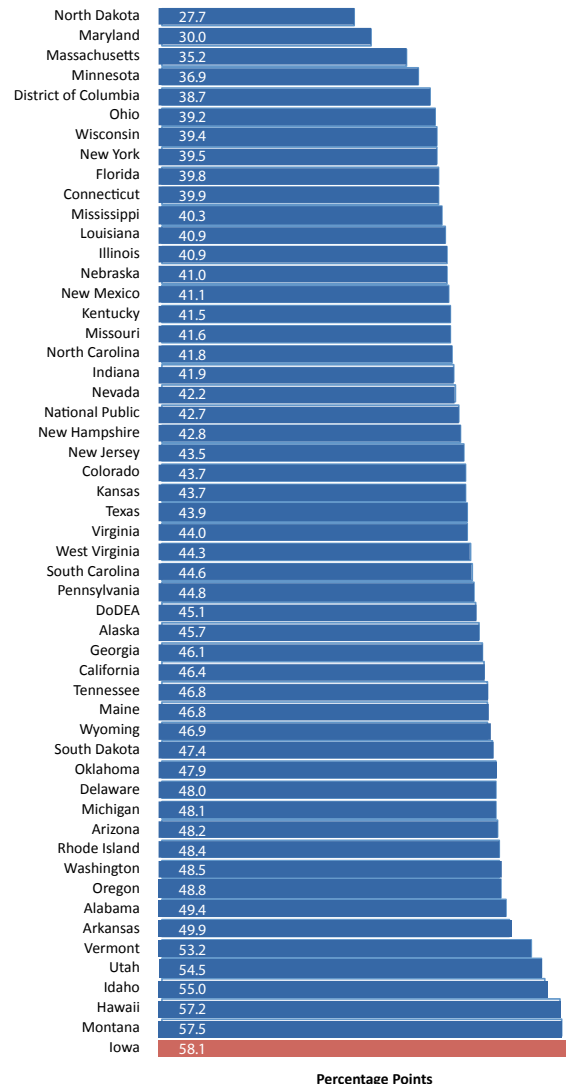
Achievement gap for students with disabilities

The achievement gap between students in Iowa with and without disabilities on the 2009 NAEP is the worst in the nation. The gap for students with disabilities in fourth-grade reading (57 percent) and eighth-grade mathematics (58 percent) is largest of all states and jurisdictions based on the percent of students performing at the basic achievement level or above. The states with the smallest gaps were Maryland (18 percent for fourth-grade reading) and North Dakota (28 percent for eighth-grade mathematics).

NAEP 2009 Reading Grade 4 Percent at Basic or Above: Gap between Students with No Disabilities and Students with Disabilities



NAEP 2009 Mathematics Grade 8 Percent at Basic or Above: Gap between Students with No Disabilities and Students with Disabilities



“The persistence and size of the achievement gap for students with disabilities in Iowa is not just embarrassing—it is intolerable.”

Jason E. Glass, Ed.D.
State Director, Iowa Department of Education



Achievement gaps next steps

Since the historic publication of The Coleman Report in 1966, *Equality of Educational Opportunity*, schools have been working to close achievement gaps between middle-income, white students and racial, socioeconomic, and disability groups.

Research suggests that in-school factors and home/community factors impact the academic achievement of students and contribute to the gap. Efforts to combat the achievement gap have been numerous, but too often are fragmented. Such efforts have ranged from affirmative action and multicultural education to finance equalization, improving teacher quality, and school testing and accountability programs. Progress has been made, but it has been slow, not dramatic, and currently insufficient. Iowa must continue working to find solutions that integrate in-school, home, and community-based resources to support students with extra challenges.

Gaps in the life and school experiences of minority groups and low-income children parallel the achievement gaps as they have for many years (Barton and Coley, 2009). Demographic changes present considerable challenges to Iowa and its education system. The Iowa Department of Education recently began a statewide initiative called, “Response to Intervention,” aimed directly at closing achievement gaps. It is believed that this evidence-based approach, if faithfully implemented, may make a difference in closing these chronic and persistent achievement gaps.

Impact:

Until significant achievement outcomes are attained with minority students at all education levels, large and growing segments of Iowa’s students will be deprived of the skills and knowledge they need to compete in an increasingly global economy. Thus, Iowa’s inability to close achievement gaps becomes not just an educational challenge, but also a concern for the long-term economic vitality of the state.

Opportunity:

Increasing attention and supports toward underperforming student groups must be a priority to begin closing achievement gaps. This requires that every classroom be staffed with a highly effective educator who has the tools to actively engage, motivate, and instruct his/her students. Iowa must attract, prepare, support, and retain highly effective educators.

Iowa vs. the world:

Is Iowa good enough? Not yet.

Graduates of Iowa schools compete not only with those from other states, but also with graduates from other nations. The economy is global, and students must compete internationally for jobs. The way to improve, however, is not to seek and conquer, but to share and learn best practices and successful examples, and put those best practices into action where they make sense. Measuring the success of new methods and practices through **international benchmarking**, or comparing Iowa's results to student results in other countries, is a critical tool in assessing how well the state is doing.

Recently, Eric Hanushek and colleagues (2010) compared the United States' student mathematics performance to other nations seeking highly-skilled workforces (see chart on following page). Mathematics proficiency is a key measure that employers value in recruiting and developing candidates for the highly-valued technology, engineering, health care, and research jobs needed to advance a country's standard of living and quality of life. In ranking the percentage of advanced students, Iowa was listed behind France, Norway, Ireland, and Russia, but above Spain and Latvia.

On all measures reported, Iowa ranked below the U.S. national average and below many nations internationally. The analysis is but one indicator of how far Iowa must progress to produce a world-class workforce that can compete on the global stage.

The landmark education report, *A Nation at Risk*, noted that American students were outperformed on international academic tests by students from other industrial societies and forcefully condemned the "rising tide of mediocrity" that was eroding the nation's schools, stating that, *"If an unfriendly foreign power had attempted to impose on America, the mediocre educational performance that exists today, we might well have viewed it as an act of war"* (NCEE, 1983). The evidence presented in this document suggests that several states, and certainly other nations around the world, have responded to this "rising tide." However, questions still remain as to whether Iowa has sufficiently confronted this issue and if the state is ready to take the actions necessary to make significant systemic improvements.

Well-prepared students are one of the essential components to creating a highly-skilled and competitive workforce. A recent McKinsey & Company report (2009) estimates **that closing the achievement gap between the U.S. and other nations would generate an estimated \$1.3 to \$2.3 trillion increase in the Gross Domestic Product.**

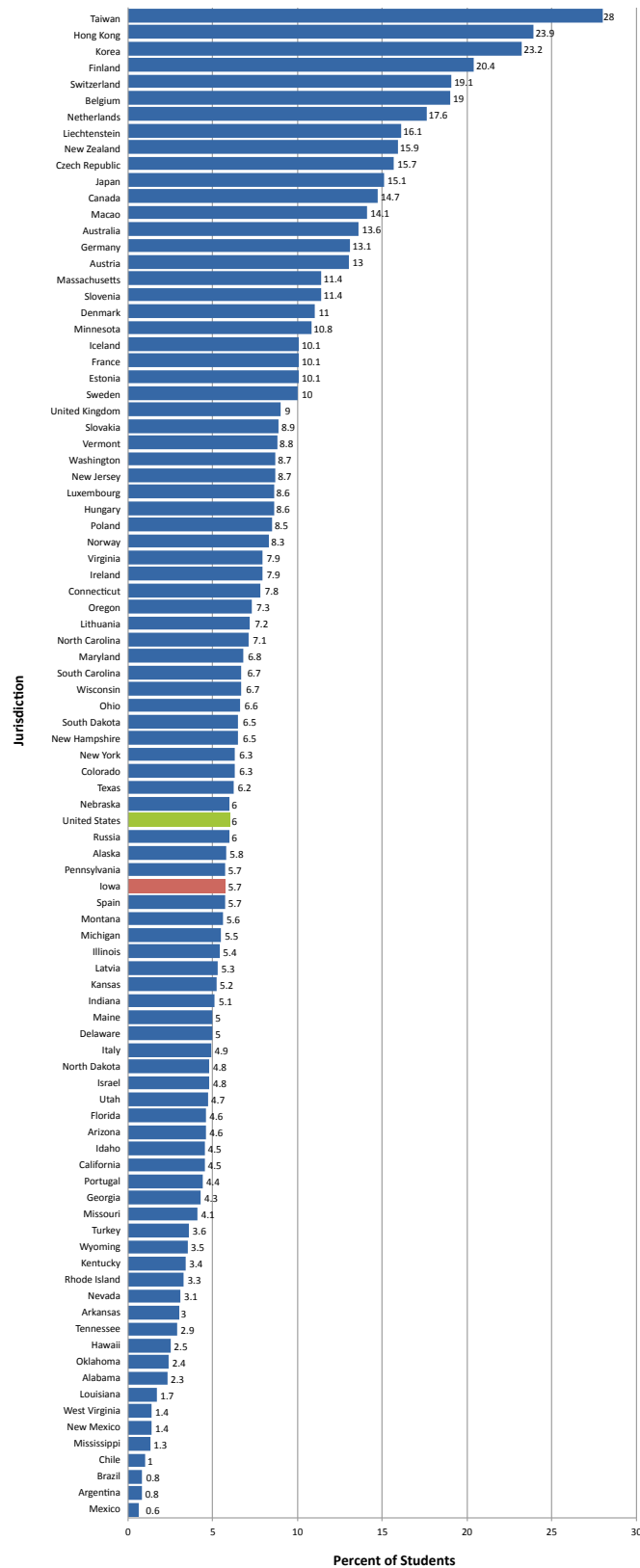
Impact:

The lack of significant achievement gains is likely holding back the Iowa economy. Every year that passes with another generation of Iowa's graduates underprepared for the global workforce is an opportunity lost that can never be reclaimed.

Opportunity:

Investing in and supporting Iowa's schools will be a critical step in helping strengthen the state's economy. Students need a solid foundation for success. To do so requires identification of limitations and reframing them as challenges to overcome. Innovation must be boldly encouraged through sharing new ideas and insights with other educators and stakeholders. This means identifying new and better ways to instruct students than ever before.

Class of 2009: Percentage of students at advanced level in math in selected U.S. states and countries participating in PISA 2006.





College degree attainment **below average**

In the recent report, *The Undereducated American*, Carnevale and Rose (2011) make the case that the United States' education system is under preparing the national workforce for the future needs of the U.S. economy. They estimate that the U.S. economy will need another 20 million workers with at least some post-secondary education over the next 15 years.

Regionally, 26 percent of the population age 25 and older in the Midwest held a bachelor's degree in 2009. This is slightly below the national average of 27.9 percent. The state with the lowest percent was Indiana (22.5) while the highest was Minnesota at (31.5). Out of the 12 Midwestern states, Iowa had the fourth lowest percentage of people with a bachelor's degree in 2009 (25.1).

The District of Columbia had the highest percent in the nation of residents with bachelor's degrees at 48.5 percent, while West Virginia had the lowest percent at 17.3 percent. Out of the 51 territories included in this analysis (50 states and the District of Columbia), Iowa tied for the 16th lowest percent of people with a bachelor's degree in 2009.

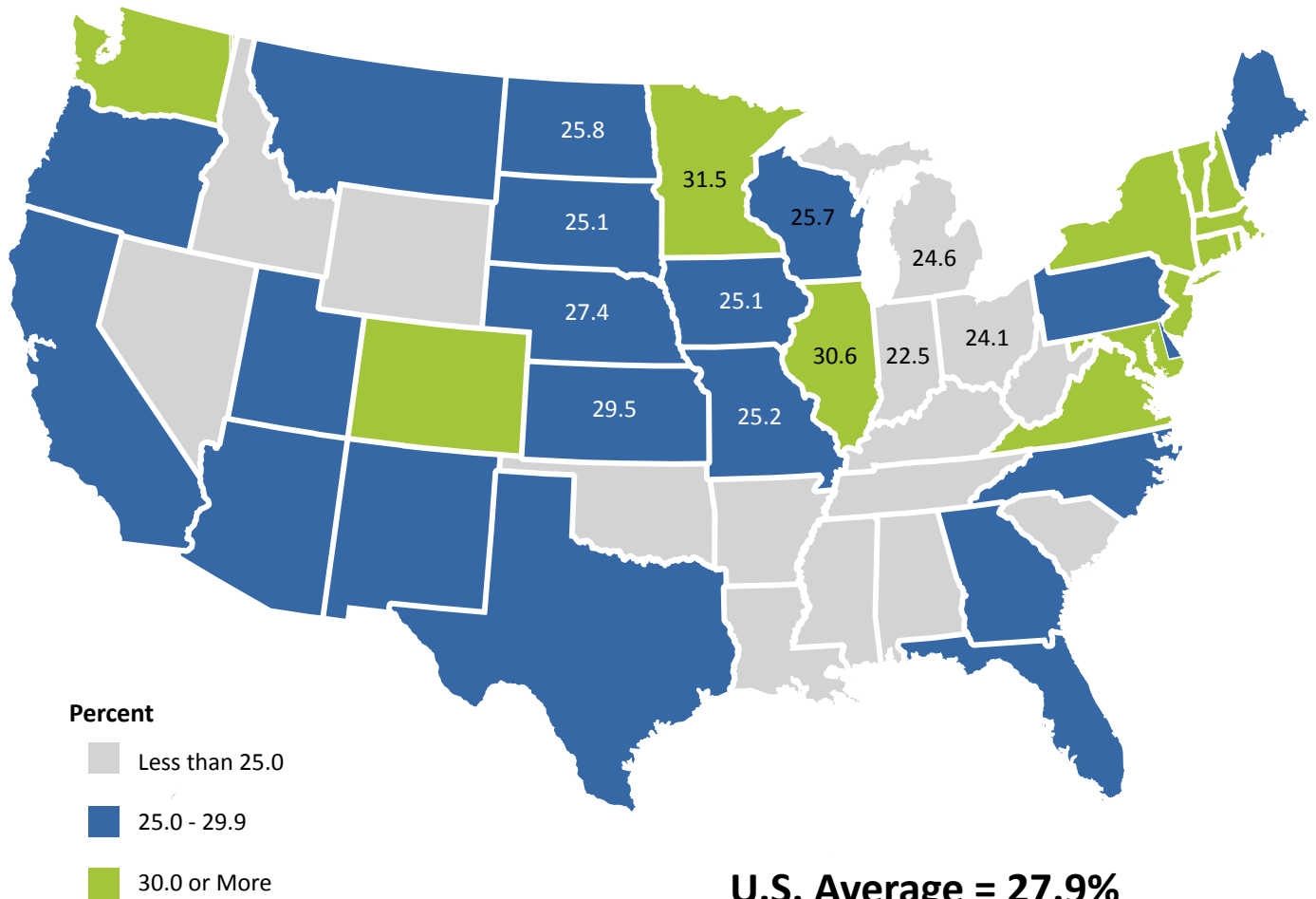
Impact:

Without a focus on college- and career-readiness for all students, Iowa will continue to lag behind other states in having a highly-educated workforce. This will decrease Iowa students' competitive advantage and reduce opportunities for Iowa's economy to flourish.

Opportunity:

Iowa's education system must support efforts to ensure that students leave the elementary and secondary system with the skills to succeed at the next level. In order for Iowa to attract and retain a highly-educated and skilled talent, the Iowa education system must provide tools and resources to support a world-class workforce.

Percent of Population (age 25 or older) with at Least a Bachelor's Degree



SOURCE: American Community Survey, 2009

Conclusion

Proud of the past

From the one-room school house depicted on the state's commemorative quarter proclaiming "foundation in education" to the modern schools of the state today, Iowa has a rich education history. The ACT and the Iowa Tests of Basic Skills began here. Iowa led the nation in scholastic achievement for decades. Teachers graduating from Iowa college and university education programs have been, and still are, highly sought after across the country.

But this wonderful education picture also reveals areas in which Iowa can and must make dramatic improvements. This truth grows more vivid every day. Iowa's tradition in education has become simultaneously the state's greatest strength and its greatest liability. That is, the state's perception of being good has prevented Iowa from doing the things that need to be done to become great.

Iowa must have a world-class education system to have a world-class workforce. Educational attainment makes a significant impact on economic achievement nationally and internationally. All Iowa students need to graduate college- and career-ready. This means raising the bar for Iowa. Jerald (2008) notes that the United States (and Iowa) cannot afford to rest on its past accomplishments.

"The global economy is here...if state leaders want to ensure that their citizens can compete, they must seize the initiative, looking beyond America's borders and benchmarking their education systems with the best in the world."

Jerald, 2008



Preparing for the future: Iowa's opportunity

If Iowa is to attain the goal of becoming a national leader in education, what does the state need to do next? The Iowa education system must set a clear and cohesive policy direction. Iowa must construct a reform-minded agenda which builds from its strengths and past accomplishments.

Iowa must build and support an educator workforce of world-class quality. Iowa has to support educators across the continuum from teacher preparation programs through mentoring and induction into and throughout their careers. Iowa's preparation programs should provide clear expectations which are linked with the state's Teaching Standards and aligned nationally. It is essential to retain these future teachers through a thoughtful, strategic compensation and support program.

Iowa student achievement once led the nation. We must now build an education system that leads the world. Iowa must have clear standards and higher expectations for all students. Fair measures must be implemented and used to provide feedback across the education system. Educators require a system of multiple measures which can provide feedback to gauge supports needed for instructional improvement.

In the innovation age, Iowa students must not only learn to use the technology of the 21st century, but also must take command of these technologies. The state must provide student learning environments that encourage and support progress. It is not enough to know how to use computers or mobile apps. Students must understand their design and the higher purpose and advancements that technology can enable. It is not enough just to read well or speak well or write accurately. Students must be taught to persuade and defend and do so convincingly. Those states and countries that fail to break through to these new levels will act in supporting roles. Those that succeed will build and own the future.

To attain these new competitive thresholds will require **highly effective educators** for every student, **a clear set of expectations** for all students, and a spirit of **aspiration and innovation** geared toward improving learning. It will also require a commitment to adequate funding of the effort, strategic use of precious and finite tax dollars, and the political will to engage in improving schools over the long haul. Building great schools comes from dedicated and focused efforts with the singular goal of increased student achievement—and not from silver-bullet, gimmick, or patchwork fixes designed to appease a special interest or any particular ideology.

The opportunity to restore Iowa's proud education tradition to greatness is here. The future will tell if Iowa embraced the bold steps needed to help its students vigorously compete and prosper in a rapidly-changing world.

References/Citations

- Barton, P., & Coley, R. (2009). *Parsing the achievement gap II*. Princeton, NJ: Educational Testing Service. Retrieved from <http://www.ets.org/Media/Research/pdf/PICPARSINGII.pdf>
- Carnevale, A., & Rose, S. (2011). *The undereducated American*. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/undereducatedamerican.pdf>
- Chazan, D. (1994). Algebra for all students? *Journal of Mathematical Behavior*, 15(4), 455–77.
- Fiester, L., & Annie E. Casey Foundation (2010). *Early warning! Why reading by the end of third grade matters*. (KIDS COUNT Special Report). Retrieved from <http://www.aecf.org>
- Grinstead, M. (2011). *Mobility and attendance: Effects on student achievement*. Unpublished manuscript.
- Hanushek, E. A., Peterson, P. E., & Woessmann, L. (2010). *U.S. math performance in global perspective: How well does each state do at producing high-achieving students?* Cambridge, MA: Harvard Program on Education Policy and Governance & Education. Retrieved from http://www.hks.harvard.edu/pepg/PDF/Papers/PEPG10-19_HanushekPetersonWoessmann.pdf
- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Galtimore, MD: Paul H. Brookes Publishing Co.
- Hernandez, D. J. (2011). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. Special Report. Annie E. Casey Foundation. Retrieved from <http://www.aecf.org>
- Iowa Department of Education. (2011). *Achievement gaps in Iowa*. Retrieved from intersect.iowa.gov
- Jerald, C. D. (2008). *Benchmarking for success: Ensuring U.S. students receive a world-class education*. Washington, DC: National Governors Association, Council of Chief State School Officers, and Achieve. Retrieved from <http://www.achieve.org/BenchmarkingforSuccess>
- McKinsey & Company. (2009). *The economic impact on the achievement gap in America's schools*. Retrieved from http://www.mckinsey.com/App_Media/Images/Page_Images/Offices/SocialSector/PDF/achievement_gap_report.pdf
- National Commission on Excellence in Education (NCEE). (1983). *A Nation at Risk*. Washington DC: United States Department of Education.
- National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics*. Reston, VA: NCTM.
- Southern Regional Education Board (SREB). (1998). *Education's weak Link: Student performance in the middle grades*. Atlanta, GA: SRED.
- Walker, D., Greenwood, C., Hart, B., & Carta, J. (1994). Prediction of school outcomes based on early language production and socioeconomic factors. *Child Development*, 65, 606–621.

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